DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Solid Waste Program
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ENVIRONMENTAL ASSESSMENT (EA)

SECTION 1.0 DESCRIPTION OF PROJECT

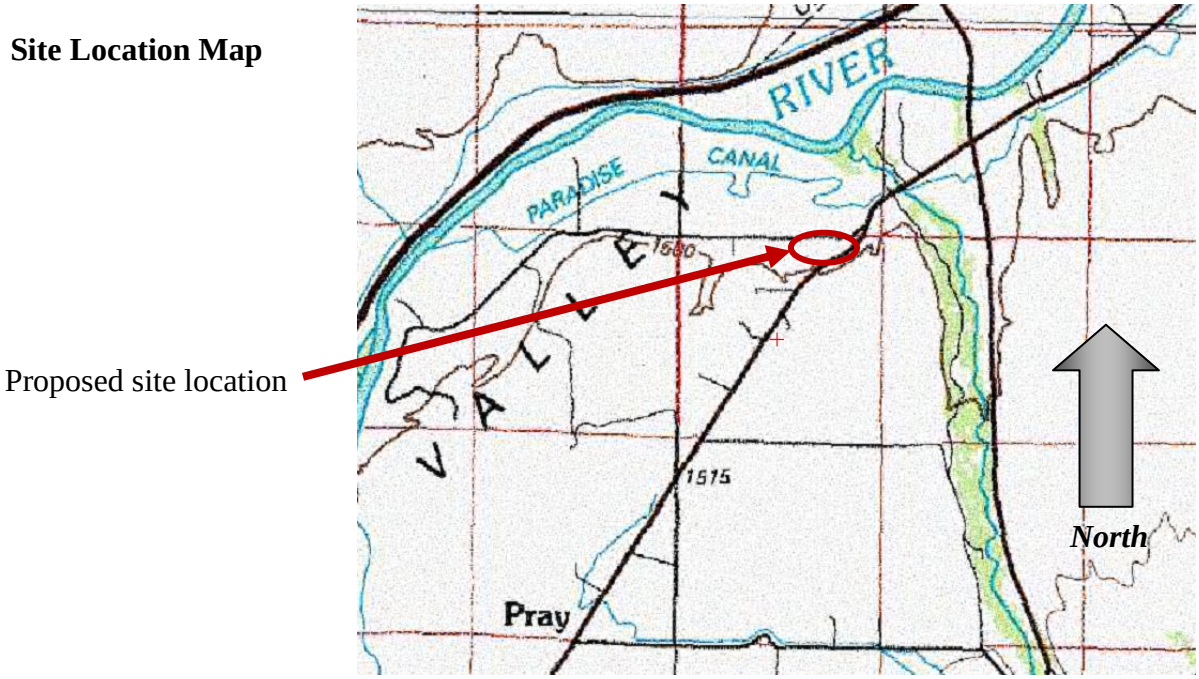
Mr. Michael D. and Mrs. Magdalen M. Adkins (applicants) submitted a solid waste management system license application to the Montana Department of Environmental Quality (Department) Solid Waste Program for the licensure of a proposed Class III Waste Tire Monofill. The proposed landfill is located approximately 1.75 miles north of Pray, in the N ½ of the NE ¼ of Section 18, T5S, R9E, Park County, Montana. At the present time, the site contains an old, historic gravel mine (pit). The applicant's propose to expand this existing historic pit and use it for the disposal of waste tires only, a Group III waste. The proposed tire monofill will be developed in phases and will have a total waste disposal capacity of 700,000 cubic yards (280,000 tons), with an operating life of approximately 20 years.

Benefits and Purpose of the Proposal

The main objective of the proposal is to provide cost-effective disposal of waste tires for residents and businesses in the area. Tires will be hauled to the facility by the operators, licensed haulers, tire retailers, and private individuals. The proposed facility will be a privately operated landfill. There are currently only four licensed tire-only disposal facilities in Montana, three of which are located in western Montana. Licensure of this facility will provide a facility in central Montana that will likely reduce the overall disposal costs and provide an additional option for waste tire management for individuals and businesses in the region.

Site Location: The proposed 11.7 acre site is located on property owned by the applicant, just off of Montana Highway 540 (East River Road) in the N ½ of the NE ¼ of Section 18, T5N, R9E, Park County, Montana. The 11.7 acre parcel is approximately 1.75 miles north of Pray, Montana (Figure 1).

Figure 1: Site Location Map



Site Geography and Topography: The proposed tire monofill site is located in the Paradise Valley ecoregion, approximately one-half mile east of the Yellowstone River. The Paradise Valley region is an intermontane valley containing grasslands and meadows and is primarily composed of Quaternary alluvium and Tertiary sedimentary rock. Natural vegetation is dominated by fescues and wheatgrasses. Common land uses include rangeland, cropland, recreation, rural residential developments, and commercial activities including logging, construction, and mining.

The proposed site contains an historic gravel mining operation that was mined for sand and gravel products from approximately 1948 through 1965. The historic gravel pit that remains on the site currently occupies the western half of the proposed site. The elevation of the site ranges from 4820 feet above mean sea level (msl) in the base of this old gravel pit to 4880 feet msl over the remainder of the site, with the majority of the site being relatively flat (Figure 2). The proposed landfill site is located on a bench approximately 75 feet above Yellowstone River floodplain.

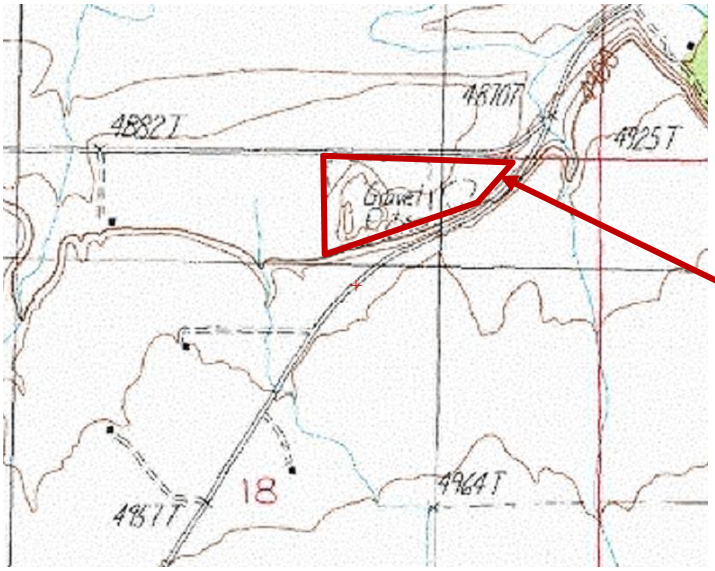


Figure 2: Site Topography

Site Climate: The climate in the Paradise Valley region is typical of the Yellowstone River Basin (YRB) and is characterized by fluctuations and extremes. Typical of the YRB is the seasonal climate regime that results from the interaction between the air masses originating in the Gulf of Mexico, the northern Pacific Ocean, and the Arctic regions. The Gulf air tends to dominate during the spring and early summer, but Arctic air dominates in the wintertime. As a result, temperatures are generally coldest in January, with an average day time temperature of 26.7^{o}F. In summer, the average daily maximum temperature is 80.5^{o}F. In the area, most precipitation falls between April and June. Average annual precipitation from the Livingston FAA site, north of the proposed monofill site, is approximately 15.7 inches per year.

Landfill Features: The disposal unit, tire processing building, and equipment shop will be the dominant features of the site. Presently, the proposed site contains an historic gravel pit that occupies the western half of the site. In addition, four small residential dwellings occupy the southeast portion of the property. These dwellings will be removed as the facility is developed to facilitate expansion of the waste disposal unit. A portion of the property is also currently being used by the Adkins Construction Company as a construction materials yard and equipment maintenance shop. The applicants propose to

construct, at some time in the future, a waste tire processing building to house a waste tire shredder. The building design, layout, and construction details, as well as the waste tire shredder and all other equipment and appurtenances, will be reviewed and approved by the Department in advance of any construction and operation activities.

Monofill Unit Construction and Waste Sequencing — The waste tire monofill will be constructed and developed in two phases (Figure 3). The existing gravel pit, currently occupying approximately 4.5 acres of the site, will be excavated to the west and north to a total depth of 60 feet below ground surface (bgs) and at least 1:1 (H:V) sideslopes. When Phase 1 is completed, it will encompass approximately 8.7 acres. Excavation and landfilling operations will commence along the western boundary of the monofill. The base elevation for each phase will be approximately 4820 feet msl. As the pit is enlarged, topsoil on the natural ground surface will be stripped and used to construct a berm along the perimeter of the property. These bermed stockpiles will be reserved for use as final cover and will be vegetated in the interim to minimize soil erosion. The materials that are excavated below the topsoil will be screened to remove the large boulders, cobbles, and rocks. The rejected material will be hauled out of the waste disposal pit and stockpiled on site. The screened material will be stockpiled in the pit and used for the monthly/quarterly cover. Dust control measures in the pit, including the use of water sprinklers on the soil in the pit, will be implemented during the screening activities, as necessary, to minimize dust generation.

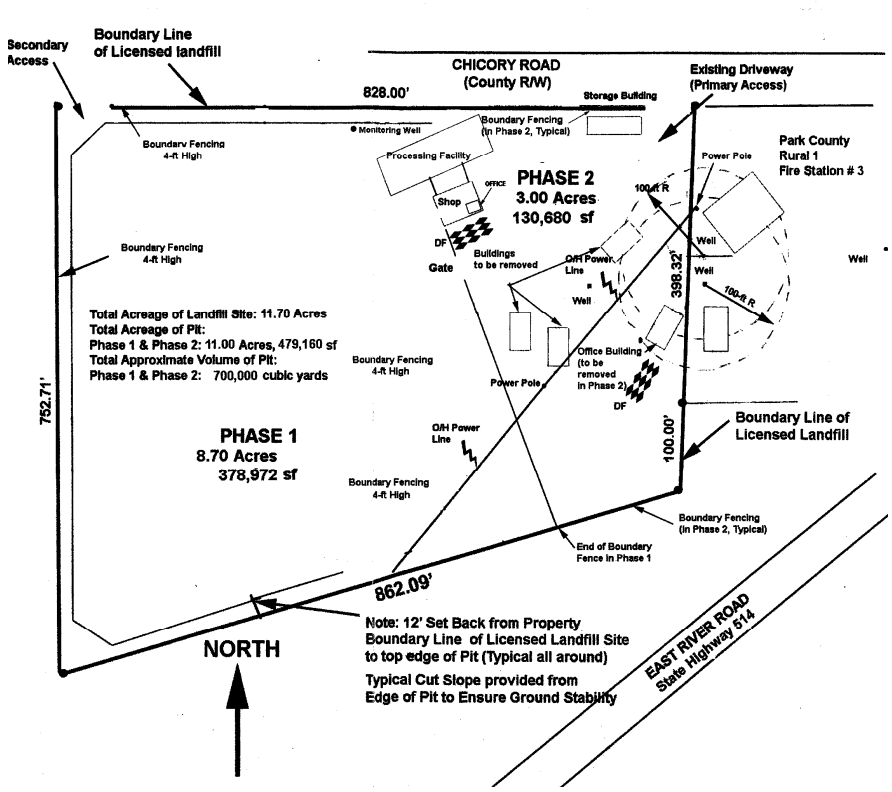


Figure 3: Site Development Plan

The largest open disposal area at any time during the active life of the facility will be two (2) acres. Active landfilling will begin in the west-southwest corner of Phase 1, where tire shreds and whole tire carcasses will be placed in 5 foot lifts, covered, and compacted. Landfilling activities will proceed to the north and east from this location. As landfilling activities encroach on the gravel screening operations located in the northern portion of the pit, the screening operations will be relocated. Landfill

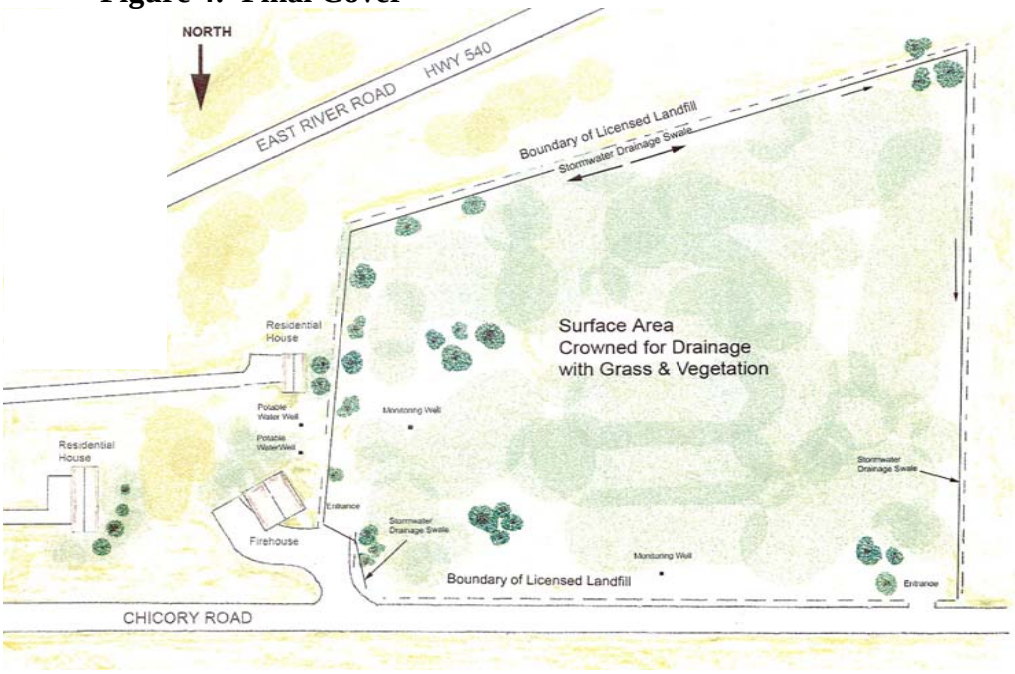
operations will then proceed in an easterly direction towards the Phase 2 area. As the Phase 1 area reaches final grade, the excavation into the Phase 2 area will commence along the southern boundary. Pit excavation and landfilling operations will then continue to the north. As the landfilling activities in Phase 2 encroach upon the waste tire processing buildings, these buildings will be relocated over the closed Phase 1 area. Upon reaching final grade, an 18 inch thick layer of screened cover material will be placed over the waste and will be topped by a minimum of 6 inches of loamy topsoil that was excavated from the site during construction. The finished cap over the Phase 1 and Phase 2 areas will be tied together upon closure to form a contiguous waste mass beneath a single final cover and will be contoured with an average slope of 2% towards the perimeter of the pit to promote stormwater runoff.

Gate House & Equipment Storage Buildings — The facility will be accessed by an all weather road at the northeast gated entrance where a gate house, scale, and equipment storage and shop buildings are located. (see Figure 3)

Soil Stockpiles — The topsoil removed during site development will be stockpiled and bermed around the perimeter of the property within the licensed boundary. At a minimum, all soil stockpiles will be seeded to prevent runoff and erosion. In addition, other best management practices (BMP's) may be used to control sediment erosion as needed.

Landfill Unit Cap — Phased closure of the landfill will proceed as needed when each landfill unit reaches its design capacity, with the largest open area occupying 8.7 acres. Upon final closure, the cover materials over Phase 2 will be tied into the cover over the Phase 1 area. The cap surface will be graded for drainage, shaped to blend into the existing topography, and vegetated with select native plant species. Drainage swales will be installed on the final cover to maintain drainage and limit erosion as needed. The native plant species, similar to the surrounding native grassland habitat, will provide an adequate range of rooting depths and a sufficient growing season to optimize transpiration of moisture. Vegetation will be established on the final cover in a timely manner to ensure at least 50% coverage by the end of the first year, as verified by the Department. A complete stand of native plant species shall develop within three years after planting (Figure 4).

Figure 4: Final Cover



Operation and Maintenance Plan: Operations at the facility will follow an Operations and Maintenance (O&M) Plan describing the Department-approved procedures for all landfill activities.

Personnel — The facility will be operated as a private landfill. The day-to-day administration and operation of the landfill will be the responsibility of the applicants. The facility will be staffed by 4 to 6 full-time employees and 2 part-time employees. The gatehouse will be staffed during normal business hours for the receipt of incoming loads of waste tires and maintenance of load tickets and receipts. The remaining facility employees will operate the tire processing equipment and landfill equipment, compact the waste, and apply the necessary soil cover.

Operating Hours — The tire monofill facility will be open Monday through Friday from 7:30 a.m. to 5:00 p.m. The site may be open on Saturdays from 8:00 a.m. to noon, as necessary. The site will be closed on Sundays and on legal holidays.

Access Control — The site will be accessed from Chicory Road, a paved county road. As depicted in Figure 3, the main entrance into the facility will be approximately 500 feet from the intersection of Chicory Road and East River Road. The site is fenced and gated, and the gate will be locked when the facility is closed. A sign will be posted at the facility entrance that indicates the hours of operation of the monofill facility. Commercial vehicles will enter the facility through the double gates at the primary access point and will first be directed to the scale to weigh prior to unloading waste tires. Until the tire processing building is constructed and the equipment is installed, commercial vehicles will be directed into the monofill for unloading. Empty commercial vehicles will then be directed back to the scale to weigh out before departing the facility. Public traffic that arrives when the facility is open is directed to public drop-off area near the monofill entrance. Waste tires from the public drop-off area will be disposed of in the landfill at the end of each working day.

Acceptable Wastes — Only waste tires will be accepted at this facility.

Landfill Equipment — The full-time equipment assigned to the landfill includes:

- Rubber-tired front loader to transport and apply daily soil cover
- Track excavator and track bulldozer to excavate disposal cells and stockpile soil
- Vibratory sheep-foot compactor for compacting wastes
- Material handling conveyors to move shredded tires from the tire processing building into the pit and to move excavated soil to the soil stockpile areas

Daily Landfill Operations — Waste tires will be accepted at a maximum operational rate of 5,000 carcasses per day from three potential sources: (1) waste tires that have been processed by company trucks at source locations, (2) whole carcasses delivered to the landfill by hired trucks from maintenance shops, retail businesses, and (3) waste tires dropped off by private individuals. All waste tires received for disposal will be landfilled directly into the pit until the processing building has been constructed and the shredder is operational.

Once the processing building and shredder are operational, waste tires will be chopped, cut, or shredded to reduce the volume of wasted air space and increase the number of waste tires that can be placed into each cubic yard of pit volume. Waste tire pieces that have been cut, chopped, or shredded off-site will be conveyed directly into the pit. Whole tire carcasses delivered to the landfill by commercial vehicles will be off-loaded into the processing building to be chopped, cut, or shredded, before being conveyed into the pit. Waste tires delivered to the site in private vehicles will be dropped off in the public area.

Tires left in the public area will be moved into the waste tire processing building at the end of each working day.

Waste tires will be landfilled in 5 foot lifts, covered with the screened soil excavated from the pit, and then compacted and covered at least every two to three weeks as the fill operation proceeds across the open pit. No more than 9,000 square feet of rubber pieces will remain exposed at any one time (Figure 5).

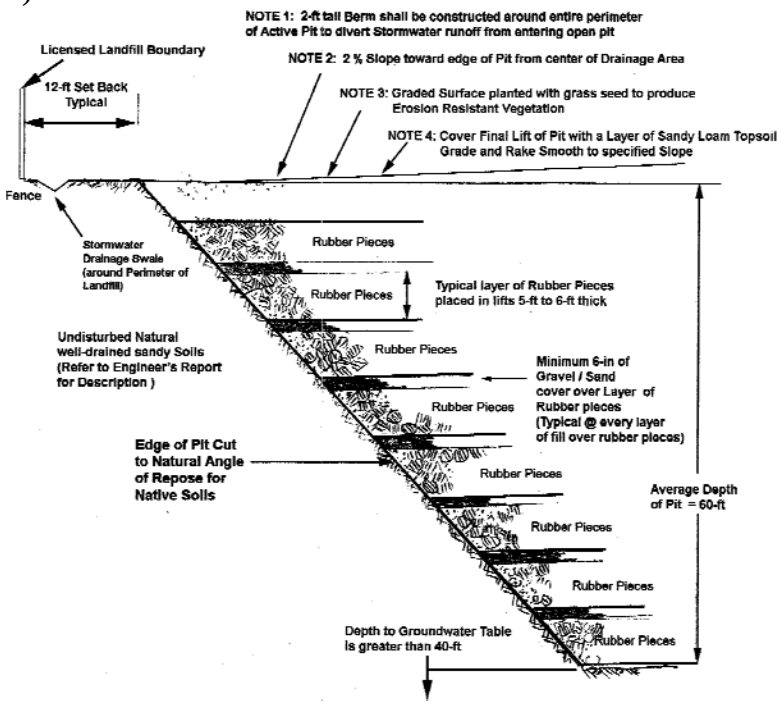


Figure 5: Waste Sequencing Plan

Storm Water Control — The facility will follow erosion, drainage control, and sediment BMP's. The BMP's, including the construction of berms to redirect storm water away from the active landfill operations and the establishment and maintenance of vegetation on closed areas of the landfill, will be implemented as necessary. A storm water control berm, approximately 2 feet high, will be constructed no more than 10 feet from the edge of the open pit to control run-on into the pit. The berm will be maintained until the pit reaches grade and the landfill is capped. Areas receiving final cover will be contoured for positive drainage so that surface runoff will be routed away from the active disposal area and will not pond over the waste. Runoff from fully re-vegetated and closed areas of the landfill final cover may discharge naturally off-site. Ditches, swales, and berms will be constructed around the perimeter of the disposal area to divert storm water run-on away from the active landfill unit. Suitable vegetation will be encouraged wherever it will minimize storm water flow, erosion, and sediment transport.

Contingency Planning — The landfill O&M Plan includes a contingency plan for fires. The risk of fires will be reduced by minimizing the area of exposed waste tires and applying cover to the waste tires every two to three weeks. The facility will take additional precautions, including limiting the use of potential sources of ignition, to further reduce the potential for fires. Portable fire extinguishers will be placed in prominent locations within buildings, structures, and vehicles to be readily available to employees in the area if the need arises. Additionally, the facility is adjacent to the Park County Rural

#1 Fire Station #3 facility. At least one facility employee will be a trained member of the rural volunteer fire department and will have access to the fire station and equipment if necessary. In the event of a fire, the facility will contact the local fire department for assistance and will notify the Department. The burning or smoldering materials will be segregated from the other waste within the disposal unit and will be extinguished using soil as the primary means to smother the fire.

Post-Closure Care — The final cover will be monitored periodically for drainage performance, repair of erosion, and vegetative cover to ensure successful performance of the cap through the post-closure care period. The effectiveness and maintenance of the storm water control system will also be monitored. Repairs to the storm water control system and the cap will be made as necessary.

SECTION 2.0 ALTERNATIVES CONSIDERED

The following provides a description of reasonable alternatives whenever alternatives are reasonably available and prudent to consider:

A decision by the Department is triggered when the applicants uphold their request for licensure of the active solid waste management facility. The applicants, however, may at any time choose to withdraw the application by exercising the "no action" alternative. If they choose the 'no-action' alternative, they could seek to locate a similar facility elsewhere and continue their current business operation at the proposed landfill site.

Alternative A: The "no action alternative". Under this alternative, a final decision by the Department is not required because the applicant will have chosen to withdraw the application for the tire monofill at the site. By deciding to withdraw the application from consideration by the Department, the applicant could seek an alternative site for their proposal. Although it is plausible, the applicant's selection of this alternative is unlikely. Rather, the applicant's will likely continue their request for licensure of the proposed facility at the current site.

In the absence of the applicant's selection of the 'no-action' alternative, and prior to the Department's final decision, two other possible alternatives were considered during the preparation of this EA.

Alternative B: The Department denies the license application for the proposed Class III Waste Tire monofill facility because the applicant failed to provide information needed to address any deficiencies identified during the review of the application and/or the public comment phase. The decision to deny the application is unlikely because the Department has found the application complete for public consideration. Deficiencies could be due to an unforeseen shortfall in meeting technical or landfill performance requirements, licensing criteria, regulatory criteria or legal issues, or the ability of the applicant to mitigate a potentially substantial impact to human health or the environment. As a result of denial, the applicant could locate, investigate, and apply for a license at another site suitable for a Class III landfill.

Alternative C: The Department decides to approve the application and issue a new license establishing the Adkins Class III Waste Tire Monofill facility as proposed by the applicant. Several factors support the viability of this option:

1. There is a need for the continued disposition of the inert wastes in the region.
2. The population, land use, and development of land surrounding the proposed monofill facility are sparse, minimizing the potential risk of adverse effects on human health due to the unlikely release of pollutants to the environment from the operation of the proposed facility.

In consideration of these alternatives, the potential environmental impacts of Alternative C were evaluated for the proposed project based on the information provided and Department research on the area surrounding the proposed site. The results of the Department's evaluation of potential environmental impacts related to the proposed facility are summarized in Section 3.0.

SECTION 3.0 ANALYSIS OF POTENTIAL IMPACTS

This section evaluates the potential environmental effects that may occur on the physical and human environment if the proposed facility is approved. Tables 3.1 and 3.3 identify the physical and human elements that may be impacted by licensure of the proposed facility. Each table is followed by an discussion of the potential impacts to the resources that might be affected by the proposal.

TABLE 3.1 - POTENTIAL IMPACTS ON THE PHYSICAL ENVIRONMENT

PHYSICAL ENVIRONMENT	Major	Moderate	Minor	No	Unknown	Attached
1. SITE GEOLOGY & SOIL QUALITY - STABILITY & MOISTURE: Are there unusual geologic features?				**X**		X
Will the surface features be changed?			**X**			
Are fragile, compactible or unstable soils present?				**X**		
Are there special reclamation considerations?				**X**		
2. WATER QUALITY, QUANTITY & DISTRIBUTION: Are important surface or ground water resources present?				**X**		X
Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?				**X**		
3. AIR QUALITY: Will pollutants or particulate be produced?				**X**		X
Is the project influenced by air quality regulations or zones (Class I air-shed)?				**X**		
4. DEMANDS ON ENVIRONMENTAL RESOURCES OR LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area?				**X**		X
Are there other activities nearby that will affect the project?				**X**		
5. TERRESTRIAL, AVIAN, AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?				**X**		X
6. VEGETATION COVER, QUANTITY & QUALITY: Will vegetative communities be permanently altered?				X		X
Are any rare plants or cover types present?				**X**		
7. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present?				**X**		X
Any wetlands?				**X**		
Any species of special concern?				**X**		
8. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?				**X**		X
9. AESTHETICS: Is the project on a prominent topographical feature?				**X**		X
Will it be visible from populated or scenic areas?				**X**		
Will there be excessive noise, light or odors?				X		

CUMULATIVE AND SECONDARY IMPACTS — Direct and indirect impacts are those effects that occur in or near the proposed project area and might extend over time. Often, the distinction between direct and indirect effects is difficult to define, thus in the following discussion, impact or effect means both types of effects. Cumulative impacts are restricted to the net effects of the proposed project because no other known projects are proposed in this area. Secondary impacts are induced by a direct impact and occur at a later time or distance from the triggering action. The cumulative impacts from the licensure of the proposed Class III Solid Waste Management Facility are minor.

ANALYSIS OF TABLE 3.1 - POTENTIAL IMPACTS ON THE PHYSICAL ENVIRONMENT

This section evaluates the potential environmental effects that may occur on the physical environment if the proposed facility is approved. The number on each of the underlined resource headings corresponds to a resource listed in the tables. Generally, only those resources potentially affected by the proposal are discussed. Therefore, if there is no effect on a resource, it may not be discussed.

1. Site Geology and Soil Quality - Stability and Moisture

The Adkins Class III Waste Tire Monofill landfill is situated in the Paradise Valley, between the Gallatin and Absaroka Mountain Ranges. The facility is located on Quaternary-age alluvium associated with the Yellowstone River. The bedrock unit beneath the facility consists of Archean-age amphibolites and gneiss. The alluvium at the facility is characterized by sand and gravel with frequent cobbles and some small boulders. A claybound zone of varying thickness is reported in most well logs near the facility between 100 to 150 feet below ground surface. The total thickness of the alluvium beneath the site is unknown but greater than 250 feet.

The natural soils at the site consist of the Beaverell cobbly loam and the Cozdome-Cozberg complex, consisting of sandy loams. Key soil properties are summarized in Table 3.2 and a map of the soil types are shown on Figure 3.1. The soils were developed from the alluvium present on the surface at the site. Soil characteristics trend toward deep and well-drained with low available water capacity. These soils have a loamy surface horizon approximately two feet thick underlain by a gravelly and cobbly subsoil.

Because the site had been previously used as a sand and gravel pit, the top soil has been removed from a large part of the site. Thus, during the operations of the tire landfill, only minor impacts to soils are expected. Following closure of the landfill the natural top soil will be replaced and revegetated, resulting in an improvement in site soil conditions compared the current condition of the site.

Soil Type	Map Key	Depth	Drainage	Permeability	Available Water Capacity	Erosion Hazard	Compaction Characteristics
Cozedome-Cozberg complex, 0-4% slopes	25B	Very deep	Well drained	High	Low	Low	Fair – Poor
Beaverell cobbly loam, 0-2% slopes	421A	Very deep	Well drained	Moderately High – High	Low	Medium – Low	Fair – Poor

Table 3.2: Summary of Soil Properties

Figure 3.1: Map of Soil Types

2. Water Quality, Quantity and Distribution

Surface Water

The Adkins Class III Waste Tire Monofill landfill is located on the alluvial plain of the Yellowstone River approximately 1.75 miles north of Pray. The site is located approximately one half mile south of the Yellowstone River at the base of the first alluvial terrace and is approximately 75 feet above the river channel elevation. Mill Creek is located approximately one third mile east of the facility

Two intermittent drainages are mapped on the United States Geological Survey (USGS) Pray 1:24,000 quadrangle map located a short distance to the east and west of the facility. Surface water flows draining into these drainages would occur only during periods of heavy rainfall or rapid snowmelt. These intermittent channels drain in a northerly direction off the alluvial terrace towards the Yellowstone River, but only extend approximately 500 feet beyond the terrace on the USGS map. There are no natural springs known within the immediate area of the proposed landfill facility.

As discussed in the Storm Water Control section, BMP's that include the construction of storm water control berms along with the establishment and maintenance of vegetation will be implemented as necessary. The storm water control berm will be constructed prior to the commencement of landfilling operations to control runon into the pit. The berm will be maintained until the pit reaches grade and the landfill is capped. Therefore, all storm water from the active landfill operation will remain in the active area, which has the capacity to hold the runoff from the 25-year 24-hour storm. A permit for storm water discharge from the proposed landfill is not required, since there will be no discharge from the active landfill

area. Thus, no surface water impacts are anticipated due to the implementation of the BMP's during the proposed operations.

Groundwater
An unconfined aquifer is hosted by the alluvial sands and gravels of the Yellowstone River valley. This aquifer provides a significant source for most of the drinking water in the vicinity of the proposed facility. The alluvial aquifer is a very productive aquifer with hydraulic conductivities ranging from the 100's to 1,000's feet per day. Based on water levels in wells within two miles of the site, groundwater flow in the alluvial aquifer is generally from the south-southwest to north-northeast. There is no evidence that the bedrock beneath the facility hold useable quantities of groundwater.

Nearby Groundwater Supply Wells
There are many water supply wells located near the proposed tire monofill. Based on a review of the Montana Bureau of Mines and Geology (MBMG) database of existing water supply wells, there are 91 domestic water supply wells located in the alluvial aquifer within a one-mile radius of the facility. The nearest domestic water supply wells are located less than 500 feet from the facility. According to the MBMG database, these wells are completed at depths from 139 to 161 feet below ground surface and have static water levels between 91 and 104 feet.

Based upon the inert nature of the Class III waste proposed to be disposed of at the facility, and the separation of the waste from groundwater, there are no anticipated impacts to groundwater resources from the disposal of waste tires at the site.

3. Air Quality

In general, air quality concerns related to landfills are associated with increased dust from landfill traffic and site construction and maintenance activities.

Additional traffic on Chicory Road from the Highway to the landfill related to the construction and operation of the landfill may cause an increase in the levels of airborne dust. As this occurs, dust suppression methods such as watering the road will lessen the impact. Construction to expand the pit on site will cause an increase in internal landfill traffic and will cause an increase in airborne dust during the period of excavation and construction. Since the construction periods will be short in relation to the operating life of the facility, these effects will be minor. During pit excavation and material screening, dust control measures, such as wetting the surface before working on it and using water sprinklers to control dust, will be initiated as is typical for earthwork during construction. Normal operational traffic on the site could cause a minor increase of suspended dust particles in the air during the summer months. If this becomes a problem, dust control measures, including the application of a dust palliative or water, will be implemented on the interior roads.

The excavation and placement of cover material may increase the dust in the air. During the dry summer and fall months, the cover material will be wetted prior to its placement so that the net effect will be minor. All long-term soil stockpiles will be seeded to prevent erosion and airborne dust.

4. Demands on Environmental Resources of Water, Air and Energy

Energy demands related to landfill operation are primarily due to the hauling of waste to the facility. Lesser demands are from excavation and construction of new cells, and the compaction, covering and other routine landfill activities. The applicant's heavy equipment and construction business is currently located at the site. Approval of the license application will result in the continued use of this site in a similar manner to the current usage. Therefore, no additional impacts are anticipated.

5. Terrestrial and Aquatic Life and Habitats

The applicant's heavy equipment and construction business is currently located at the site. The site is sparsely vegetated with large areas of soil exposed. There are no wetlands or riparian areas on site. In addition, there is sparse rural development and human population surrounding the site. Therefore, there is adequate acreage of habitat conducive to transient populations of grazing large game, wandering predators, and burrowing small mammals available in the vicinity to accommodate any terrestrial or avian species that may be forced to relocate. Approval of the license application will result in the continued use of this site. Therefore, no additional impacts to the terrestrial and aquatic life and habitats are anticipated.

6. Vegetation Cover, Quantity and Quality

A search of the Montana Natural Heritage Program website found one plant species of concern in T5S, R9E – the wedge-leaved saltbush. However, this plant is found in wetland and riparian areas, neither of which are found on the site. Further, the landfill will be constructed, developed, and closed in phases. Therefore, vegetation will be removed as portions of the site are developed. Currently, the applicant's heavy equipment and construction business is currently located at the site. As a result, the site is very sparsely vegetated. As portions of the landfill are filled to final grade, they will be covered with an earthen final cover and topsoil and will then be re-seeded with native plant species appropriate to the area as recommended by the Natural Resource Conservation Service. The spectrum of native plant species will gain in diversity as natural succession progresses during the post-closure period.

After final closure of the proposed landfill, re-vegetation will make the area suitable for wildlife habitat and livestock grazing. In order to assure the integrity of the landfill cover re-vegetation process, livestock grazing will be restricted sufficiently to allow the cover vegetation to become fully established.

7. Unique, Endangered, Fragile or Limited Environmental Resources

A search of the Montana Natural Heritage Program website found a record of 6 species of concern in the T5S, R9E, that includes three mammals, two avian, and one aquatic species. The mammals include the Wolverine (*Gulo gulo*), the Canada Lynz (*Lynx canadensis*), and the Grizzly Bear (*Ursus arctos*). The avian species include the Great Blue Heron (*Ardea herodias*) and the Bald Eagle (*Haliaeetus leucocephalus*). The aquatic species consists of the Yellowstone Cutthroat Trout (*Oncorhynchus clarkii bouvleri*). No other unique, endangered, fragile, or limited environmental resources were identified. The habitats for these species are typically boreal forest and alpine habitats, subalpine conifer forests, conifer and riparian forests, and mountain streams, rivers, and lakes. These habitats do not exist on the parcel proposed for licensure. Therefore, loss of the acreage of the proposed facility area for wildlife habitat will not be considered critical as there is adequate acreage of the habitat necessary to accommodate these terrestrial, avian, and aquatic species. The area proposed for licensure has been used for the applicant's

heavy equipment and construction business for many years. Therefore, there are no anticipated impacts to these resources.

8. Historical and Archaeological Sites

The State Historic Preservation Office (SHPO) was contacted regarding the proposed construction of the tire monofill. SHPO searched their records and found no documented historical or archaeological sites in the area. This does not mean that there are no such sites in that location, but that no sites are known to exist, to date. SHPO also determined that there is a low likelihood that cultural resources would be impacted due to the historic site use.

9. Aesthetics

The proposed landfill will likely have only minor, if any, impact on aesthetics. The proposed site is located in an area that was used historically as a gravel pit and is currently the location of the applicant's heavy equipment construction business. Although the site will be visible from East River Road, all active landfilling activities will occur below grade and the applicant will apply soil cover over the waste on at least every three weeks. In addition, all tire shredding activities will be conducted indoors. Therefore, visual aesthetics of the property will likely improve slightly as the site is developed and the equipment and materials currently stored on-site are relocated for landfilling operations. Areas that reach grade will be covered with 12 inches of intermediate soil cover and will be capped, closed, and vegetated once that particular phase of facility operations is completed.

TABLE 3.3 - POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

HUMAN ENVIRONMENT	Major	Moderate	Minor	No	Unknown	Attached
1. SOCIAL STRUCTURES & MORES: Is some disruption of native or traditional lifestyles or communities possible?				**X**		
2. CULTURAL UNIQUENESS & DIVERSITY: Will the action cause a shift in some unique quality of the area?				**X**		X
3. DENSITY & DISTRIBUTION OR POPULATION & HOUSING: Will the project add to the population and require additional housing?				**X**		
4. HUMAN HEALTH & SAFETY: Will this project add to health and safety risks in the area?				**X**		X
5. COMMUNITY & PERSONAL INCOME: Will the facility generate or degrade income?				**X**		
6. QUANTITY & DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs?			**X**			X
If so, estimate number.						
7. LOCAL & STATE TAX BASE REVENUES: Will the project create or eliminate tax revenue?			**X**			X
8. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads?			**X**			X
Will other services (fire protection, police, schools, etc.) be needed?				**X**		
9. INDUSTRIAL, COMMERCIAL & AGRICULTURAL ACTIVITIES & PRODUCTION: Will the project add to or alter these activities?			X			X
10. ACCESS TO & QUALITY OF RECREATIONAL & WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract?				**X**		
Is there recreational potential within the tract?				**X**		
11. LOCALLY ADOPTED ENVIRONMENTAL PLANS & GOALS: Are there state, county, city, USFS, BLM, tribal, etc., zoning or management plans in effect?				**X**		
12. TRANSPORTATION: Will the project affect local transportation networks and traffic flows?				X		

CUMULATIVE AND SECONDARY IMPACTS — Direct and indirect impacts are those effects that occur in or near the proposed project area and might extend over time. Often, the distinction between direct and indirect effects is difficult to define, thus in the following discussion, impact or effect means both types of effects. Cumulative impacts are restricted to the net effects of the proposed project because no other known projects are proposed in this area. Secondary impacts are induced by a direct impact and occur at a later time or distance from the triggering action. The cumulative impacts recognized from the licensure of the proposed the Class III landfill are minor. The net potential impact of the proposed facility on the human environment is probably very minor. Development and population surrounding the proposed site is sparse. The increased employment that may be generated by the construction of the facility will have a very minor but positive effect on the local income and tax base of the county. There are no recognized secondary impacts.

ANALYSIS OF TABLE 3.3 - POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

This section evaluates the potential environmental effects that may occur on the human environment if the proposed facility is approved. The number on each of the underlined resource headings corresponds to a resource listed in the tables. Generally, only those resources potentially affected by the proposal are discussed. Therefore, if there is no effect on a resource, it may not be discussed.

2. Cultural Uniqueness and Diversity

The State Historic Preservation Office (SHPO) was contacted regarding the proposed construction of the tire monofill. SHPO searched their records and found no documented historical or archaeological sites in the area. This does not mean that there are no such sites in that location, but that no sites are known to exist, to date. SHPO also determined that there is a low likelihood that cultural resources would be impacted due to the historic site use.

4. Human Health and Safety

The most common potential for impacts to human health from the proposed facility arise from the potential disease transmission from animal and insect vectors. There are no close residences downwind of the facility that will be impacted by dust resulting from operations, but dust control is required to protect customers and employees of the facility. Rules governing the application of cover will control mosquitos, rodents or other vectors by hindering the collection of rainwater and access into the waste tires. Consequently no impacts to human health are anticipated.

6. Quantity and Distribution of Employment

During the construction and operational phases of the landfill there could be a very minor increase in local employment due to the need for contractors, site operators, and associated support.

7. Local and State Tax Base and Tax Revenue

Since there will likely be a few additional workers hired during the construction phases of the proposed landfill, construction of the proposed facility could have a very minor positive effect on the local tax base.

8. Demands for Governmental Services

The potential impact of the proposed facility licensure will be minor. Department personnel must spend time reviewing the proposal and licensing the landfill. The Department will perform inspections of the site during and after construction. During the construction phases, there may be a slight increase in traffic on the roads leading to the landfill, but the impact is expected to be minor because very little added wear and tear or traffic enforcement will result due to the few additional contractors briefly involved over a short time period.

9. Industrial, Commercial, and Agricultural Activities and Production

Construction of the proposed facility will cause a minor increase in the industrial activity of the area during construction due to the need for contractors and associated materials and machinery repairs. Since the area

immediately surrounding the proposed site is sparsely developed rural land and the applicant's heavy equipment and construction business is already currently located at the site, no additional impacts are anticipated.

SECTION 4.0 CONCLUSIONS AND RECOMMENDATIONS

A listing and appropriate evaluation of mitigation, stipulations and other controls enforceable by the agency or another government agency:

The proposed licensure of the Adkins Class III Waste Tire Monofill landfill will meet the minimum requirements of the Montana Solid Waste Management Act and administrative rules regulating solid waste disposal. Adherence to these Department licensing criteria will mitigate the potential for harmful releases and impacts to human health and the environment by the proposed facility. Along with standard criteria for the Solid Waste Management System License as issued by the Department, and as validated by the local Park County Health Officer, the licensee must adhere to the following specific license conditions:

(1) Disposal of only waste tires in the landfill.
(2) No open flames in or near the main disposal area or in the waste tire processing building.
(3) Wastes must be covered at least every 3 weeks with a minimum of 6-inches of soil.
(4) Dust emissions from the site must be controlled.
(5) Site operations must control the proliferation of disease vectors such as mosquitos, rodents, and skunks.
(6) Site access must be controlled at all times.

Recommendations:

The recommendation of the Department is to distribute the EA and request comments from the public regarding the proposed Adkins Class III Waste Tire Monofill landfill.

If an EIS is needed, and if appropriate, explain the reasons for preparing the EA:

The Department finds that an Environmental Impact Statement (EIS) is not necessary due to the mitigating factors provided by the solid waste rules and the applicant's proposal for licensure of the Adkins Class III Waste Tire Monofill landfill facility at the selected site. Consequently, the combined effect of all such factors at the site will ensure to a reasonable extent that any potential direct or cumulative impacts to human health and the environment from the proposed landfill are minor.

If an EIS is not required, explain why the EA is an appropriate level of analysis:

The Department finds that construction, operation, and post-closure care of the proposed Adkins Class III Waste Tire Monofill landfill will not significantly affect the quality of the human environment both within and surrounding the local area. The proposed project will be reasonably expected to have minor additional impacts on terrestrial life, vegetation and other aspects of the physical and human environment relative to the current use of the site. Based upon the relatively inert nature of the Class III waste proposed to be disposed of at the facility, and the separation of the waste from groundwater, there are no anticipated impacts to groundwater resources from the disposal of waste tires at the site. Therefore, an EA is the appropriate document to address potentially minor impacts of the proposed licensure of the Adkins Class III Waste Tire Monofill landfill.

Other groups or agencies contacted or which may have overlapping jurisdiction:
Montana Natural Heritage Program
State of Montana Historic Preservation Office
U.S. Geological Survey
Montana Bureau of Mines and Geology
U.S. Department of Agriculture - Natural Resource Conservation Service

Individuals or groups contributing to this EA:
Natural Heritage Program
State Historic Preservation Office
Octagon Consulting Engineers, LLC
U.S. Geological Survey
Montana Bureau of Mines and Geology
U.S. Department of Agriculture - Natural Resource Conservation Service

EA prepared by: Mary Louise Hendrickson & Martin Van Oort – Montana Department of Environmental Quality, Solid Waste Program

Date: January 31, 2012

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